Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1(Original). A method for attenuating the virulence of a microbial pathogen or for inhibiting or reducing colonization by a microbial pathogen in a patient in need thereof, comprising administering to the patient in need an effective amount of c-di-GMP or a cyclic dinucleotide analogue thereof to attenuate the virulence of, or to inhibit or reduce colonization by, the microbial pathogen.

2(Original). The method of claim 1, wherein the attenuation of the virulence of a microbial pathogen comprises treating a bacterial infection.

3(Original). The method of claim 2, wherein said bacterial infection is a *Staphylococcus aureus* infection.

4(Original). The method of claim 2, wherein said bacterial infection is mastitis, a *Staphylococcus aureus* infection of the mammary gland.

5(Original). The method of claim 2, wherein said bacterial infection is treated by inhibiting microbial biofilm formation or by reducing the microbial biofilm already formed.

6(Original). The method of claim 5, wherein said c-di-GMP or cyclic dinucleotide analogue thereof comprises c-di-GMP or a cyclic dinucleotide analogue thereof which acts as a c-di-GMP agonist.

7(Original). The method of claim 6, wherein said microbial biofilm is *Staphylococcus aureus* biofilm.

8(Original). The method of claim 5, wherein said c-di-GMP or cyclic dinucleotide analogue thereof comprises a cyclic

dinucleotide analogue of c-di-GMP which acts as a c-di-GMP antagonist.

9(Original). The method of claim 8, wherein said microbial biofilm is *Vibrio cholerae* biofilm or *Salmonella enteritidis* biofilm.

10(Original). The method of claim 5, wherein said microbial biofilm is on the skin or on a nasal or mucosal surface.

11(Original). The method of claim 2, further comprising administering an antibiotic compound which is effective in treating said bacterial infection.

12(Original). The method of claim 1, wherein said cyclic dinucleotide analogue of c-di-GMP is selected from the group consisting of cyclic dinucleotides compounds (I)-(XIX).

13(Original). The method of claim 1, wherein the inhibition or reduction of colonization of a microbial pathogen comprises treating a patient at risk of being colonized by a microbial pathogen or a patient already colonized by a microbial pathogen.

14(Original). The method of claim 13, wherein the colonization of a microbial pathogen that is inhibited or reduced is on the skin or on a nasal or mucosal surface.

15(Original). The method of claim 13, wherein said microbial pathogen is *Staphylococcus aureus*.

16(Original). The method of claim 13, wherein said patient is a carrier of *Staphylococcus aureus*.

17(Original). A method for inhibiting microbial colonization and biofilm formation or for reducing colonization and pre-formed microbial biofilm on a solid surface, comprising exposing the solid surface to an effective amount of c-di-GMP or a cyclic dinucleotide analogue thereof to inhibit microbial

colonization and biofilm formation or to reduce microbial colonization and pre-formed biofilm on said solid surface.

18(Original). The method of claim 17, wherein said solid surface is a solid surface of a medical device.

19(Original). The method of claim 18, wherein said medical device is implantable in or capable of attaching to a patient.

20(Original). The method of claim 18, wherein said medical device is implanted in a patient or otherwise in contact with a patient.

21(Original). The method of claim 17, wherein the microbial colonization and biofilm is *Staphylococcus aureus* colonization and biofilm and said c-di-GMP or cyclic dinucleotide analogue thereof is c-di-GMP or a cyclic dinucleotide agonist thereof.

22(Original). A pharmaceutical composition, comprising c-di-GMP or a cyclic dinucleotide analogue thereof as an active ingredient and a pharmaceutically acceptable carrier or excipient.

23(Original). The pharmaceutical composition of claim 22, wherein said cyclic dinucleotide analogue of c-di-GMP is selected from the group consisting of cyclic dinucleotide compounds (I)-(XIX).

24(Original). The pharmaceutical composition of claim 22, comprising a cyclic dinucleotide analogue which acts as a c-di-GMP agonist.

25(Original). The pharmaceutical composition of claim 22, comprising a cyclic dinucleotide analogue which acts as a c-di-GMP antagonist.

Claims 26 and 27 (Cancelled).

28(New). The method of claim 1, wherein said patient in need thereof is a mammal.

29(New). The method of claim 1, wherein said patient in need thereof is human.

30(New). The method of claim 1, wherein said patient in need thereof is a bird.